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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/086,601

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Sheng-feng Chung

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EXAMINER

BRINEY III, WALTER F

ART UNIT

PAPER NUMBER

2644

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/086,601	Applicant(s) CHUNG, SHENG-FENG	
	Examiner Walter F Briney III	Art Unit 2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings were received on 07 September 2004. These drawings are accepted by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Price (US Patent 6,393,110) in view of PCMCIA press release (16 September 1997) and further in view of Nelson et al. (US Patent 6,404,393).

Claim 1 is limited to **a network interface card**. Price discloses **a DSP** (figure 3, element 376) **connected to said CardBus interface to process a digital signal; a D/A converter** (figure 3, element 372); **a transmitter amplifier** (figure 3, element 364) (figure 4, element U1); **a multi-level filter** (figure 4, elements C12, C7, C16) **connected to a D/A converter** (figure 3, element 372); **a protection circuit** (figure 4, element U1, see optical boundary) **coupled to said transmitter amplifier** (figure 4, element U1). Price discloses a terminal (figure 3, element 228) connected to the modem described above. These devices are interfaced by a data controller (figure 3, element 388); however, Price does not disclose the protocol for communication

between the two devices. Price does mention that the terminal is a personal computer (column 4, lines 52-53), and that the modem is a PCMCIA card (column 5, lines 49-55). Therefore, Price anticipates all limitations of the claim with the exception of **a CardBus interface for digital signal processing and controlling information transmission**.

A PCMCIA press release on 16 September 1997 discloses that CardBus is the new standard in PC-card peripherals. It benefits from greater speed than 16-bit PC-cards (PCMCIA press releases, pages 16-17) making it ideal for high-speed DSL. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the PCMCIA card of Price using CardBus technology (i.e. CardBus interface) because CardBus is the industry standard and provides high-speed 32-bit access.

Clearly, Price discloses connecting the modem of figure 3 to a telephone line (figure 3, element 230), however, there is no mention of how to connect the modem. Therefore, Price in view of the PCMCIA press release makes obvious all limitations of the claim with the exception of **a phone jack connected to said protection circuit for plugging a transmission line to communicate to outside**. Nelson teaches a PCMCIA card that connects with a DSL line through an RJ-11 connector (column 3, lines 44-55). It would have been obvious to one of ordinary skill in the art at the time of the invention to connect the modem of Price using an RJ-11 jack as taught by Nelson for the purpose of enabling a modular interconnection with a personal computer and a network.

Claim 2 is limited to **the network interface card of claim 1**, as covered by Price in view of the PCMCIA press release and further in view of Nelson. Price discloses a line isolation facility (i.e. **said protection circuit**) (figure 3, element 362) that protects

from lightning strikes (i.e. **includes a current protector**) (column 5, lines 30-45).

Therefore, Price in view of the PCMCIA press release and further in view of Nelson makes obvious all limitations of the claim.

Claim 3 is limited to **the network interface card of claim 1**, as covered by Price in view of the PCMCIA press release and further in view of Nelson. Price discloses a line isolation facility (i.e. **said protection circuit**) (figure 3, element 362) that protects from lightning strikes (i.e. **includes a bias protector**) (column 5, lines 30-45).

Therefore, Price in view of the PCMCIA press release and further in view of Nelson makes obvious all limitations of the claim.

Claim 4 is limited to **the network interface card of claim 1**, as covered by Price in view of the PCMCIA press release and further in view of Nelson. Price discloses a line isolation facility (i.e. **said protection circuit**) (figure 3, element 362) that protects from lightning strikes (i.e. **includes a lightning protector**) (column 5, lines 30-45).

Therefore, Price in view of the PCMCIA press release and further in view of Nelson makes obvious all limitations of the claim.

Claim 6 is limited to **the network interface card of claim 1**, as covered by Price in view of the PCMCIA press release and further in view of Nelson. Price discloses three capacitors (i.e. **a three-level filter**) (figure 4, elements C12, C7, C16), which effectively block DC components from reaching the receive amp, and further the D/A converter. Therefore, Price in view of the PCMCIA press release and further in view of Nelson makes obvious all limitations of the claim.

Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anne (US Patent 6,603,808) in view of the PCMCIA press release and further in view of Nelson.

Claim 1 is limited to a **network interface card**. Anne discloses a **DSP** (figure 2, element 220); a **D/A converter** (figure 2, element DAC); a **transmitter amplifier** (figure 2, element 212); a **multi-level filter** (figure 2, elements 204, 200) **connected to a D/A converter** (figure 2, element 204); a **protection circuit** (figure 2, element 200) **coupled to said transmitter amplifier** (figure 2, element 212). Anne discloses a MAC interface (figure 2, element 224) connected to a personal computer (figure 1). These devices are interfaced by a PCMCIA port (figure 1, element 132), however, Anne does not disclose the protocol for communication between the two devices. Therefore, Anne anticipates all limitations of the claim with the exception of a **CardBus interface for digital signal processing and controlling information transmission**. A PCMCIA press release on 16 September 1997 discloses that CardBus is the new standard in PC-card peripherals. It benefits from greater speed than 16-bit PC-cards (PCMCIA press releases, pages 16-17) making it ideal for high-speed DSL. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the PCMCIA card of Anne using CardBus technology (i.e. CardBus interface) because CardBus is the industry standard and provides high-speed 32-bit access. Clearly, Anne discloses connecting the modem of figure 3 to a telephone line (figure 3, element 230), however, there is no mention of how to connect the modem. Therefore, Price in view of the PCMCIA press release makes obvious all limitations of the claim with the exception of a **phone jack**

connected to said protection circuit for plugging a transmission line to communicate to outside. Nelson teaches a PCMCIA card that connects with a DSL line through an RJ-11 connector (column 3, lines 44-55). It would have been obvious to one of ordinary skill in the art at the time of the invention to connect the modem of Anne using an RJ-11 jack as taught by Nelson for the purpose of enabling a modular interconnection with a personal computer and a network.

Claim 5 is limited to **the network interface card of claim 1**, as covered by Anne in view of the PCMCIA press release and further in view of Nelson. Anne discloses line-coupling magnetics (figure 2, element 200) **wherein said protection circuit includes a high-voltage-to-low-voltage transformer** (column 10, lines 55-65). Therefore, Anne in view of the PCMCIA press release and further in view of Nelson makes obvious all limitations of the claim.

Response to Arguments

Applicant's amendments to claim 1 have rendered the rejections under 35 U.S.C. 112 second paragraph moot, and are hereby withdrawn.

Applicant's arguments with respect to claims 1-6, filed 07 September 2004, have been fully considered but they are not persuasive.

With respect to claim 1, the applicant alleges on page 6 of their current response that Price fails to disclose the D/A converter; the examiner respectfully disagrees. In particular, just because the D/A unit (372) is integrated within the DSP, it cannot be

considered as non-existent. There is no indication in the claim that the converter has to be a physically discrete component.

With further respect to claim 1, the applicant alleges on page 6 that the isolation unit is not capable of amplification; the examiner respectfully disagrees. In particular, it is made abundantly clear in figure 5 that analog (i.e. *transformed signals*) are amplified and isolated at the same time (step 540).

With further respect to claim 1, the applicant alleges on page 6 that the filter includes resistors and inductances as well as capacitors, and that Price does not disclose the claimed multi-level filter; the examiner respectfully disagrees. As a first point, no claim limitations directed toward resistors or inductors can be found in any of the claims. Thus, the applicant's argument is moot.

With further respect to claim 1, the applicant alleges on pages 6 and 7 that Nelson does not teach connecting an RJ-11 connector to a protection circuit, and that the combination of Price and Nelson fails to meet such a limitation; the examiner respectfully disagrees. In particular, this is a piece-meal attack on the Nelson reference, as Nelson was used only to teach the need of an RJ-11 connection for the PCMCIA device disclosed by Price. If Nelson disclosed nothing more than an RJ-11 connector connected to a PCMCIA modem, the claim limitations would still be met.

With further respect to claim 1, the applicant alleges on page 7 that the optical isolation unit (U1) isolates but does not protect the PCMCIA modem from the line; the examiner respectfully disagrees. In particular, optical isolation and isolation in general are basic requirements of network connected devices, especially those that draw power

from a secondary network. In accordance with the definition of an isolation device, whether optical or capacitive as seen in figure 3, there is no electrical continuity between the two sides of the device, such that the protection device, in case of a large-voltage transient, only delivers a non-damaging amount of power.

With respect to claim 1 as rejected by Anne in view of Nelson, the applicant alleges on pages 7 and 8 that Anne does not disclose the elements as arranged; the examiner respectfully disagrees. In particular, Anne does include all the elements, and because the claim limitations only indicate that the devices are connected to each other and possess no through or direct connections, Anne in view of Nelson do indeed make obvious all limitations of the claim.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2644

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter F Briney III whose telephone number is 703-305-0347. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huyen Le can be reached on 703-305-4844. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WFB
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XU MEI
PRIMARY EXAMINER